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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,016	11/27/2001	Hwan-Seong Yu	8733.546.00	9421

7590 04/22/2003

Long, Aldridge & Norman LLP
1900 K Street, N. W.
Washington, DC 20006

EXAMINER

NGUYEN, HOAN C

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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Office Action Summary

Application No.

09/994,016

Applicant(s)

YU ET AL.

Examiner

HOAN C. NGUYEN

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-5, 7, 9 and 11-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1- 3, 4, 10 and 12 of copending Application No. 09/ 994793 (which has same assignee, e.g. LG, Philips LCD Co., LTD, but different inventors). Although the conflicting claims are not identical, they are not patentably distinct from each other because

- Claims 1, 5, 7 and 11-12 of this application over claims 1, 4 and 12 of Application No. 09/ 994793 with inspection pads of this application similar to gate contact pad, data contact pad, common voltage contact pad of Application No. 09/ 994793. The substrate made of glass is conventional for reducing cost.

- Claims 2-4 of this application over claims 2-3 of Application No. 09/994793 with cutting selected size for obvious modification.
- Claim 9 of this application over claim 10 of Application No. 09/994793.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features

- "data and gate lines" (different from inspection lines) in claims 1 and 11 must be shown or the feature(s) canceled from the claim(s).
- "a shorting bar for protecting the cell from static electricity" in claim 4.

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2871

Applicant needs to clarify how inspection lines are connected to data lines, gate lines or TFTs for the inspection purpose in claims 1 and 11. The inspection cannot be performed without the connections of the inspection lines with data lines, gate lines or TFTs.

The limitation "first unit cells" in claims 1 and 11 can be interpreted as the pixel regions.

Applicant needs to clarify how short bar is formed and connected for protecting the cell from static electricity in claim 4

There is insufficient antecedent basis for the limitations in the following claims:

- Claim 1 recites the limitation "the unit liquid crystal cells" in line 16.
- Claims 2 and 8 recite the limitations "the liquid crystal cell substrate" and "the unit cells".
- Claims 3 and 4 recite the limitation "the cutting processes".
- Claim 5 recites the limitation "the lower and upper glass substrates".

Claims 6-7, 9-10 and 12-13 are rejected since they depend on the infinitive claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2871

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi (US5657139A).

Hayashi teaches (Figs. 1, 2 and 6) a method of fabricating a liquid crystal cell for a small size liquid crystal display device comprising the steps of

- preparing a lower glass substrate 101 having a plurality of first unit cells composed of
 - array devices at a first region (display area DA),
 - a plurality of inspection pads (test pads CAYi and CAXJ) at a second region (inspection area CA),
 - an inspection line connecting the inspection pads;
 - the plurality of first unit cells (pixel regions), and data and gate lines at the first region;
- preparing an upper glass substrate 301 having a plurality of second unit cells composed of
 - color filter at a third region, a fourth region,
 - a plurality of scribe keys at a border between the third and fourth regions and
 - a common line 341 at the third region;
- forming a seal pattern on the first region of the lower substrate;
- forming a liquid crystal layer on the lower substrate having the seal pattern;

Art Unit: 2871

- aligning and attaching the upper and lower substrates;
- exposing the inspection pads of the lower substrate by scribing and breaking the upper substrate along the scribe keys; and
- performing an ON/OFF inspection of all the unit liquid crystal cells by applying a voltage to the inspection pads of the lower substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US5657139A).

It is well known in the art that the method of fabricating a liquid crystal cell for a small size liquid crystal display device wherein

- cutting the liquid crystal cell substrate into the liquid crystal cell; and performing a grinding process for smoothening the sides of liquid crystal cell, wherein an edge of the unit liquid crystal cell is polished (claim 2)
- the liquid crystal is formed before the cutting process for aligning the lower and upper substrates (claim 3);
- after the cutting process, a shorting bar (shorting circuit line) for protecting the cell from static electricity is cut for operating LCD (claim 4).

- Hayashi further teaches the lower and upper glass are about 200 X 300 mm² in size; therefore, the lower and upper glass are about 370 X 470 mm² in size for selecting various dimension that would be at least an obvious modification;
- the liquid crystal is formed in a vacuum chamber by a dispensing method for isolating liquid crystal materials from environment (claim 9).
- the lower and upper substrates are aligned and attached in the vacuum chamber for keeping moisture or void existing in liquid crystal layer (claim 10).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the method of fabricating a liquid crystal cell as Hayashi disclosed with (a) cutting the liquid crystal cell substrate into the liquid crystal cell; and performing a grinding process for smoothing the sides of liquid crystal cell, wherein an edge of the unit liquid crystal cell is polished (claim 2); (b) the liquid crystal is formed before the cutting process for aligning the lower and upper substrates (claim 3); (c) after the cutting process, a shorting bar (shorting circuit line) for protecting the cell from static electricity is cut for operating LCD (claim 4); (d) the lower and upper glass are about 370 X 470 mm² in size for selecting various dimension that would be at least an obvious modification; (e) the liquid crystal is formed in a vacuum chamber by a dispensing method for isolating liquid crystal materials from environment (claim 9); (f) the lower and upper substrates are aligned and

Art Unit: 2871

attached in the vacuum chamber for keeping moisture or void existing in liquid crystal layer (claim 10).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Mochizuki et al. (US5247375A) disclose manufacturing method of display panel.
- Tsubota et al. (US 5677749A) disclose method for producing an LCD having no spacers in the display area in which heating alleviates cell distortion or greater pressure is applied to the seal region.
- Kawano et al. (US 5677745A) disclose LCD with electrostatic discharge projections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (703) 306-0472. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

HOAN C. NGUYEN
Examiner
Art Unit 2871

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February 26, 2003

TOANTON
PRIMARY EXAMINER